FOLIA MICROBIOLOGICA

Vol. XXIV - 1979

ACADEMIA SCIENTIARUM BOHEMOSLOVACA

Digitized by the Internet Archive
in 2023 with funding from
Kahle/Austin Foundation

https://archive.org/details/folia-microbiologica_1979_24_contents

CONTENTS

Blumauerová M., Královcová E., Matějů J., Jizba J., Vaněk Z.: Biotransformations of Anthracyclinones in *Streptomyces coeruleorubidus* and *Streptomyces galilaeus* 117

Blumauerová M., Královcová E., Hošťálek Z., Vaněk Z.: Intra- and Interspecific Cosynthetic Activity of Mutants of *Streptomyces coeruleorubidus* and *Streptomyces galilaeus* Impaired in the Biosynthesis of Anthracyclines 128

Braná H., Hubáček J.: High-level Resistance to Streptomycin in *Escherichia coli* with R1 Plasmid and the Analysis of Genetic Determinants 136

Miler I., Vondráček J., Hromádková L.: The Bactericidal Activity of Sera of Healthy Neonates and of Newborns with Hyperbilirubinaemia to *Escherichia coli* 143

Takácsová G., Šubík J.: Antimicrobial and Cytolytic Activity of N,N-Dimethyl-1-methyldodecylamine Oxide 153

Volfová O., Kyslíková E., Kalašová M.: Selection of a Yeast Strain with Optimal Utilization of Straw Hydrolyzates 157

Volfová O., Kyslíková E., Sikyta B., Panoš J.: Growth of *Candida tropicalis* 2838 Cells on Straw Hydrolyzates 163

Křižková L., Dobias J., Pódová M., Nemec P.: Nematocide Effect of Entomophilic and Entomophagous Fungi 171

Plachý J.: Formation of DL-Alanine by *Corynebacterium* sp. 9366-EMS/270 176

Haenel H., Schulze J.: Contributions of Gnotobiology to Nutrition Science 197

Matějů J., Cudlín J., Steinerová N., Blumauerová M., Vaněk Z.: Partial Purification and Properties of Glucosyltransferase from *Streptomyces aureofaciens* 205

Běhal V., Vaněk Z., Hošťálek Z., Ramadan A.: Synthesis and Degradation of Proteins and DNA in *Streptomyces aureofaciens* 211

Španová A.: Genetic Mapping of the Region *c* of the Bacteriophage G101 (*Pseudomonas auriginosa*) 217

Slezáriková V., Sedliaková M.: A Comparison of UV-Induction in Exponentially Growing and Resting *Escherichia coli* B/r Hcr$^+$ 224

Ram B. P., Raba R. S., Gollakota K. G.: Inhibition of Germination of *Bacillus cereus* T Spores by Phenylglyoxal 228

Haavik H. I.: Amino Acid Control Mechanism for Bacitracin Formation by *Bacillus licheniformis* 234

Okorokov L. A., Kadomtseva V. M., Titovskii B. L.: Transport of Manganase into *Saccharomyces cerevisiae* 240

Miler I., Vondráček J., Hromádková L.: The Decreased *in vitro* Chemotactic Activity of Polymorphonuclear Leukocytes of Newborns and Infants 247

Bednářová M., Staněk M., Vančura V., Veselý D.: Microorganisms in the Rhizosphere of Wheat Colonized by the Fungus *Gaeumannomyces graminis* var. *tritici* 253

Lasík J., Staněk M., Vančura V., Wurst M.: Effect of Bacterial Polysaccharides on the Growth of *Gaeumannomyces graminis* var. *tritici* and Wheat Roots 262

Gupta J. K., Gupta Y. P.: Properties of Cellulase from *Trichoderma viride* 269

Tax J., Sedmera P., Eckardt K., Komersová I., Vaněk Z.: Presence of η-Isorhodomycinone in *Streptomyces galilaeus* JA 3043 293

Královcová E., Vaněk Z.: Growth and Production of Anthracyclines in Wild-Type and Mutant Stra ns of *Streptomyces galilaeus* 296

Královcová E., Vaněk Z.: Effect of Aeration Efficeincy and Carbon Source on the Production of Anthracyclines n *Streptomyces galilaeus* 301

Sarkar S., Chakrabarty S. L.: Nitrosoguanidine-Induced Mutations in *Streptomyces indicus* 308

Gaur A. C., Arora D., Prakash N.: Eectron Microscopy of Some Rock Phosphate Dissolving Bacteria and Fungi 314

Šestáková M.: Growth of *Candida utilis* on a Mixture of Monosaccharides, Acetic Acid and Ethanol as a Model of Waste Sulphite Liquor 318

Biely P., Krátký Z., Petráková E., Bauer Š.: Growth of *Aureobasidium pullulans* on Waste Water Hemicelluloses 328

Chandra K., Kidwai J. R., Gupta B. M.: Morphology, Serology and Biochemical Characters of Phage CVX-5, Isolated from a Patient with Colitis 334

Lívanský K.: Effect of the Nonilluminated Part of Suspension on Biomass Production in an Algal Reactor 339

Lívanský K.: Semicontinuous Cultivation of Autotrophic Algae 346

Páca J.: Physiological Characteristics and Energy Balance of *Klebsiella aerogenes* Growing in a Multistage Tower Fermentor 352

Bose Ratna, Ray B., Bose S. K.: Exoprotease Production by Sporogenous and Asporogenous Mycobacillin Non-Producer Mutants of *Bacillus subtilis* 373
Hegazi N. A., Vlassak K.: Cell Morphology and Flagellation of Nitrogen-Fixing Spirilla 376
Desai J. D.: Factors Affecting Protein Synthesis during Biotin Deficiency in *Aspergillus nidulans* 379
Houghton J. A., O'Dowd J.: The Effect of Ultrasound on Genetic Instability in Diploids of *Aspergillus nidulans* 385
Sipiczki M., Farkaš V.: Morphogenic Effects of 2-Deoxy-D-*arabino*-hexose on *Rhodosporidium toruloides* 389
Dewedar A., Mourad F. E., Sheha H. S.: *Thermomonospora* sp. T-SA-125 and Its Production of a Growth Promoting Antibiotic 396
Škrdleta V., Hyndráková A., Němcová M.: Acetylene Reduction (Dinitrogen Fixation) and Nitrification in Soil as Affected by the Structural Aggregate Size 403
Miler I., Holub M., Vondráček J., Jouja V., Hromádková L.: Skin-Window Study on the Migration of Leukocytes of Newborns and Infants 408
Hříbalová V.: Effect of Scarlet Fever Toxin on the Phagocytic Activity of the Reticuloendothelial System 415
Hříbalová V., Castrová A., Pekárek J.: Influence of Antilymphocyte and Antipolymorphonuclear Sera on the Pyrogenic Effect of Scarlet Fever Toxin 428
Lahti R., Heinonen J.: Aeration Sensitizes *Streptococcus faecalis* to Hydroxyurea 445
Israelstam G. F.: The Estimation of Alcohol Dehydrogenase Activity in Aerobic and Anaerobic "Permeabilised" Baker's Yeast Cells 449
Běhalová B., Beran K.: Activation of Proteolytic Enzymes during Autolysis of Disintegrated Baker's Yeast 455
Řičicová A., Pokorný V., Řeháček Z.: A Psychrophilic Strain *Actinoplanes* sp. 220 462
De S., Chandra A. L.: Degradation of Organic Nitrogenous Wastes by a Soil Streptomycete . . . 473
Studničková I.: Effect of Soil Microstructure on the Relationship between the Intensity of Nitrification and Soil Moisture 478
Zemek J., Košíková B., Augustín J., Jonial D.: Antibiotic Properties of Lignin Components . . . 483
Ghosh Dastidar P., Sinha A. M., Ghosh S., Chatterjee G. C.: Biochemical Mechanism of Nitrofuration Resistance in *Vibrio el tor* 487
Tučková L.: Purification and Chemical Characterization of Antigens from Sheep Erythrocytes . . 495

Brief Reports

Kubíčková D., Karpfel Z., Bezděk M.: Genetic Mapping of the Bacteriophage PS8 of *Agrobacterium tumefaciens* 182
Kulhánek M., Tadra M., Linek K., Kučár Š.: 2-Deoxy-D-*lyxo*-hexonic Acid from 2-Deoxy-*lyxo*-hexose by *Pseudomonas aeruginosa* Fermentation 185
Mlynarčík D., Devínský F., Lacko I.: Antimicrobial Efficacy of Some N,N′-Dialkyl-N,N′-dimethyl--1,6-hexanediamine Dioxides 188
Plachý J.: Formation of L-Ananine by *Streptomyces coelicolor* 3—19 191
Zemek J., Bilík V., Matulová M., Augustín J.: Antimicrobial Effect of 4-Nitrophenylhydrazones, Isonicotinoylhydrazones and N-4-Nitrophenylglycosylamines of D- and L-Aldoses 273
Varma A. K.: Vesicular-Arbuscular Mycorrhiza and Nodulation in Soybean 501

Reviews

Trávníček J., Mandel L.: Gnotobiotic Techniques 7
Štěpánková R.: Rearing Germfree Rats and Rabbits 11
Kovářů F., Štěpánková R., †Kruml J., Mandel L., †Kenig E.: Development of Lymphatic and Haemopoietic Organs in Germfree Models 32
Šterzl J.: Gnotobiological Models and Methods in Immunology 58
Bláha M., Vaňásek J., Měrka V., Špliňo M., Malý J., Široký O.: Clinical Use of Reverse Isolation in a Protected Environment 88
Ferenčík M., Štefanovič J.: Lysosomal Enzymes of Phagocytes and the Mechanism of Their Release 503

Discussion

Calam C. T.: Secondary Metabolism as an Expression of Microbial Growth and Development . . . 276
Walker J. B.: On the Development of Enzymic Pathways for the Biosynthesis of Aminocyclitol Antibiotics and Other Idiolites 286

Haavik H. I.: On the Physiological Meaning of Secondary Metabolism 365
Zähner H.: What Are Secondary Metabolites? 435

Abstracts from the International Gnotobiological Symposium 16, 44, 70, 96
Book Reviews 194, 292, 369, 444, 516

Anderlik P. 53
Antal V. D. 20
Arora D. 314
Augustín J. 273, 483

Bános S. 53
Baranov A. 100
Bartáková J. 102
Bauer Š. 328
Bednářová M. 253
Běhal V. 211
Běhalová B. 455
Belokrysenko S. S. 99
Beran K. 455
Berek L. 53
Bergendi L. 70
Bezděk M. 182
Biely P. 328
Bílík V. 273
Bláha M. 88, 96—98, 102
Bleyl D. W. R. 26
Blumauerová M. 117, 128, 205
Blüthner K. 101
Bose R. 373
Bose S. K. 373
Braná H. 136

Cabaj W. 109
Calam C. T. 276
Castrová A. 428
Černá J. 82, 84
Chakhava O. V. 44, 81
Chakrabarty S. L. 308
Chandra A. L. 473
Chandra K. 334
Chatterjee G. C. 487
Cudlín J. 205

De S. 473
Desai J. D. 379
Devínsky F. 188
Dewedar A. 396
Dienstbier Z. 46
Dlabač V. 54, 71, 72
Dobias J. 171
Dronov A. 103
Ďuračková Z. 70
Dushkin V. A. 20, 71

Eckardt K. 293

Farkaš V. 389
Ferenčík M. 70, 503
Franz J. 73

Gaur A. C. 314
Gärtner H. 44
Ghosh Dastidar P. 487
Ghosh S. 487
Ginodman H. A. 99, 103
Goiš M. 109
Gollakota K. G. 228
Gorbunova E. 100
Gorskaya E. M. 54
Grinbergs A. 46
Grütte F.-K. 26, 44
Gupta B. M. 334
Gupta J. K. 269
Gupta Y. P. 269

Haavik H. I. 234, 365
Haenel H. 25, 197
Hampl J. 73
Hegazi N. A. 376
Heinonen J. 445
Hofman J. 71, 78
Holub A. 109
Holub M. 408
Hošťálek Z. 128, 211
Houghton J. A. 385
Hříbalová V. 415, 428
Hrnčíř Z. 96
Hrodek O. 105
Hromádková L. 143, 247, 408
Hubáček J. 136
Hyndráková A. 403

Isakov Y. 99, 103
Israelstam G. F. 449
Ivanov A. A. 28
Ivašková E. 105

Jarošková L. 74, 82
Jílek M. 80
Jizba J. 117
Joniak D. 483
Jouja V. 84, 408

Kadomtseva V. M. 240
Karpfel Z. 182
Kasal P. 103—105
† Kenig E. 32
Khanykov A. V. 28
Kidwai J. R. 334
Klein P. 80
Klepalová J. 72
Komersová I. 293
Košíková B. 483
Kostka J. 73
Koukal M. 18
Kovářů F. 16, 27, 32, 48, 51, 70, 71, 73—75, 78—80
Kovářů H. 51, 75
Kozák I. 46
Král J. 103, 104
Královcová E. 117, 128, 296, 301
Krátký Z. 328
Krievina V. 46
Križková L. 171

† Kruml J. 32, 48, 84
Kubíčková D. 182
Kučár Š. 185
Kulhánek M. 185
Künzel W. 101
Kyslíková E. 157, 163

Lacko I. 188
Lahti R. 445
Lasík J. 262
Linek K. 185
Lívanský K. 339, 346
Lodinová R. 84

Maltsev V. 100
Malý J. 88, 96, 102
Mandel L. 6, 17, 27, 32, 47, 50, 51, 70, 72, 75, 82, 103—105, 107, 108
Matějů J. 117, 205
Matulová M. 273
Menšík J. 73, 109
Měrka V. 88, 96—98, 102
Miler I. 84, 143, 247, 408
Mlynarčík D. 188
Morávek F. 107
Mourad F. E. 396
Müller W. 44
Mydlil V. 103, 104

Němcová M. 403
Nemec P. 171
Nemsadze V. 99
Nevinnaya A. P. 28
Novák F. 46

O'Dowd J. 385
Okorokov L. A. 240

Páca J. 352
Panoš J. 163
Pekárek J. 428
Petráková E. 328
Piker E. G. 20
Plachý J. 176, 191
Podoprigora G. I. 55, 71, 99, 103
Pódová M. 171
Pokorný V. 462
Pospíšil M. 78, 105
Prakash N. 314
Prokešová L. 27, 73, 74
Przyjalkowski Z. 21, 109

Radnai B. 53
Ram B. P. 228
Ramadan A. 211
Rana R. S. 228
Ray B. 373
Řeháček Z. 462
Rejnek J. 73, 84
Řičicová A. 462
Ruban S. Z. 74, 81

Salajka E. 109
Sarkar S. 308
Schulze J. 25, 26, 44, 197
Schwanzer V. 29
Sedliaková M. 224
Sedmera P. 293
Šestáková M. 318
Sheha H. 396
Sikyta B. 163
Šíma P. 78, 79
Sinha A. M. 487
Sipiczki M. 389
Široký O. 96, 102
Škrdleta V. 403
Slezáriková V. 224
Smolová M. 18
Španová A. 217
Špliňo M. 88, 96—98, 102
Staněk M. 253, 262
Štefanovič J. 70, 503
Steinerová N. 205
Štěpánek J. 73
Štěpánková R. 11, 32, 47, 48, 81, 82, 101, 107
Štěpanov E. 103
Šterzl J. 58, 73, 78, 80, 81
Stožická I. 16
Stožický V. 16
Studničková I. 478
Šubík J. 153
Svoboda V. 108
Szeri I. 53

Tadra M. 185
Takácsová G. 153
Talafantová M. 17, 27, 54, 72
Tax J. 293
Titovskii B. I. 240
Tlaskalová H. 81, 82
Trávníček J. 6, 27, 47, 50, 73, 84, 101, 103—105, 107
Trebichavský I. 27, 54, 73, 82, 107
Tučková L. 495

Ulmann L. 109

Vaňásek K. 88, 96—98, 102
Vančura V. 253, 262
Vaněk Z. 117, 128, 205, 211, 293, 296, 301
Varma A. K. 501
Veselý D. 253
Viklický V. 82
Vinšová N. 84
Vitols M. 46
Vitriščak L. 46
Vlassak K. 376
Vocel J. 84
Volfová O. 157, 163
Vondráček J. 143, 247, 408

Walker J. B. 286
Wurst M. 262

Zähner H. 435
Zaitsev T. I. 55
Zemek J. 273, 483
Zoban P. 104
Zunft H.-J. 44
Zvilna R. 46